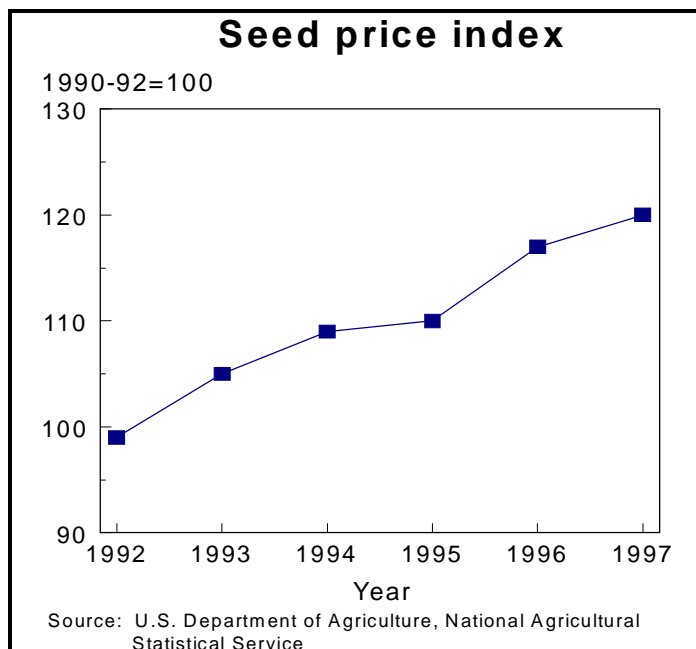


## Seed Use, Costs, and Trade

- Farmers paid more for some seed in 1997, but less for others. The seed prices paid index, however, rose 3 percent in 1997 over 1996.
- Overall seed use in the 1996/97 crop year for eight major field crops may exceed the previous year by 1 percent.
- Seed imports increased more in value in 1996 than did seed exports, causing the U.S. seed trade balance in 1996 to fall to \$384 million net exports, 9 percent below 1995.

Seed cost per acre varied among major producing States due to differences in seeding rates and seed prices. In general, areas with plentiful moisture supported heavier seeding rates. Average seeding rates and seed cost per acre for major field crops in 1996 were as follows: **Corn**—average seeding rate was 27,500 kernels per acre, up 3 percent from 1995. The average seed cost per acre, \$25.97, was 6 percent higher than in 1995, reflecting higher corn seed prices and seeding rates per acre. Only 2 percent of the planted acres of the surveyed States received Bt enhanced seed and 3 percent of the acreage received herbicide-resistant seed, compared with 3 percent and 6 percent, respectively, in the previous year. **Soybeans**—average seed cost was \$18.62 per acre. Most of the northern soybean growing States had higher seeding rates and yields and therefore greater seed cost per acre than the southern States. **Cotton**—average seeding rate and seed cost per acre was 14 pounds and \$9.85, respectively. On average, 79 percent of the acres was planted with pesticide-treated seed. **Spring wheat**—average seeding cost per acre was \$14.61 and average seeding rate per acre was 101 pounds. An average of 62 percent of the acres of the surveyed States used pesticide-treated seed. **Fall potatoes**—average cost per acre was \$223.27. The average seeding rate was 21 cwt. per acre. Eighty-six percent of the fall potato acres of the surveyed States used pesticide-treated seed. **Winter wheat**—average seeding cost per acre was \$8.27, whereas the average seeding rate was 69 pounds. Above 41 percent of the acres was planted with pesticide-treated seed.

In the 1996/97 crop year, total seed use for eight major crops (corn, sorghum, soybeans, barley, oats, wheat, rice, and cotton) is expected



to be about 1 percent higher than in 1995/96. USDA's April 1997 prices paid-index for all seeds, 120, was 3 percent higher than 1996.

The value of total seed exports in 1996 increased 5 percent, while the value of seed imports increased 29 percent over 1995. As the growth in value of imports outweighed that of exports, U.S. net seed-trade balance (net exports) in 1996, at \$384 million, was 9 percent lower than 1995. The major field crop seeds exported were corn and soybeans. The major countries of destination were Mexico, Canada, and Italy for corn seed, and Japan, Mexico, and Italy for soybean seed.

This issue of **AREI UPDATES** summarizes information on seeds from the 1996 Agriculture Resource Management Study (ARMS) surveys and other sources. Only aggregated data are presented. To obtain data for individual major producing States see box "State Level Data" on page 4.

Contact: Mohinder Gill, (202) 694-5538 or [mgill@econ.ag.gov].

### About AREI UPDATES

**AREI UPDATES** is a periodic series that supplements and updates information in **Agricultural Resources and Environmental Indicators, 1996-97 (AREI)**, USDA, ERS, AH-712, July 1997. **UPDATES** report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource use and conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this **UPDATE**. If you would like to be added to the mailing list or have other questions about **AREI UPDATES** or **AREI**, contact Richard Magleby, (202) 694-5615, [rmagleby@econ.ag.gov]. **AREI UPDATES** are available on the ERS web site—<http://www.econ.ag.gov/Briefing/arei/arei.htm>—and on AutoFax (202)694-5700 (when you get a voice prompt, press 4; when prompted again, enter 20200 and 20300 to get listings of available issues for 1996 and 1997).

**Table 1—Seeding information for major field crops and producing areas, 1996**

Crop <sup>1</sup>	Acres planted 1,000	Seeding rate per acre	Seed cost per acre <sup>2</sup> Dollars	Acres planted with:			
				Purchased seed	Bt enhanced seed	Herbicide resistant seed	Pesticide treated seed
				-----Percent-----			
Corn (10 States)	61,500	27,500 <sup>3</sup>	25.97	100	2	3	nr
Soybeans (11 States)	50,050	70 lbs.	18.62	76	nr	7	24
Cotton (7 States)	11,600	14 lbs.	9.85	66	17	2	79
Fall potatoes (3 States & RR <sup>4</sup> )	787	21 cwt.	223.27	73	1	nr	86
Winter wheat (10 States)	28,520	69 lbs.	8.27	32	nr	nr	41
Spring wheat (3 States)	16,350	101 lbs.	14.61	21	nr	nr	62
Durum wheat (ND)	3,000	107 lbs.	13.88	20	nr	nr	61

nr = not reported. <sup>1</sup>States included are listed in box "Agricultural Resource Management Study Survey." To obtain data for individual States, see "State Level Data." <sup>2</sup>Based on data from farmers who used purchased seed. <sup>3</sup>Kernels. Average plant population per acre was 24,229 (for 7 States) in 1996 compared with 23,170 (for 10 States) in 1995. <sup>4</sup>Red River Valley (RR) included the counties of Clay, Clearwater, Kittson, Mahanomen, Marshall, Norman, Pennington, Polk, Red Lake, Roseau, and Wilkin in Minnesota and Cass, Grand Forks, Pembina, Richland, Steele, Traill, and Walsh in North Dakota.

Source: USDA, ERS, Agricultural Resource Management Study (ARMS) Survey data.

**Table 2—Seed use for major U.S. field crops, crop marketing years, 1991/92-1996/97**

Crop	1991/92	1992/93	1993/94	1994/95	1995/96 preliminary	1996/97 estimated	1995/96- 1996/97 percent change
	-----1,000 tons-----						
Corn	566	528	563	510	571	580	2
Sorghum	48	39	34	34	45	39	-13
Soybeans	1,705	1,726	1,914	1,877	1,929	2,064	7
Barley	310	314	283	266	283	278	-2
Oats	290	285	240	205	194	219	13
Wheat	2,931	2,973	2,889	2,676	3,123	3,075	-2
Rice	195	180	210	205	186	185	0
Cotton, upland	120	115	117	118	144	125	-13
Total	6,165	6,160	6,250	5,891	6,475	6,566	1

Source: USDA, ERS, based on data from Agricultural Resource Management Study and Cropping Practices Surveys.

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**Table 3—April farm seed prices, 1993-97**

Item	Unit	1993	1994	1995	1996	1997	Change 96-97 Percent
<b>Field seed:</b>							
Corn	\$/80,000 kernels	72.70	72.40	77.10	77.70	83.50	7
Grain sorghum	\$/Cwt.	74.50	82.10	78.70	84.00	92.00	10
Oats	\$/bu.	4.39	4.69	4.51	5.19	5.32	3
Barley	\$/bu.	5.00	5.18	5.37	6.49	6.13	-6
Wheat (spring)	\$/bu.	5.98	7.37	7.12	8.10	7.30	-10
Wheat (winter)	\$/bu.	7.73	7.90	7.80	8.50	10.00	18
Soybeans	\$/bu.	12.40	13.60	13.40	14.80	16.10	9
Cotton	\$/Cwt.	62.70	63.50	68.20	73.00	74.90	3
Potatoes	\$/Cwt.	8.60	10.20	7.90	10.30	7.60	-26
Rice	\$/bu.	15.40	22.00	15.10	17.50	19.00	8
<b>Forage seeds:</b>							
Red clover	\$/Cwt.	148.00	148.00	134.00	172.00	184.00	7
Fescue, tall <sup>1</sup>	\$/Cwt.	87.00	71.50	88.10	109.00	148.00	36
Orchardgrass	\$/Cwt.	122.00	161.00	148.00	148.00	119.00	-20
Ryegrass, annual	\$/Cwt.	56.70	64.60	67.60	58.80	57.90	-2
Timothy	\$/Cwt.	80.60	76.00	71.00	76.00	73.00	-4
Lespedeza, sericea	\$/Cwt.	92.10	169.00	178.00	191.00	220.00	15
Alfalfa, proprietary	\$/Cwt.	269.00	266.00	274.00	277.00	282.00	6
------(1990-92 = 100)-----							
<b>Seed prices paid index</b>		105	109	110	117	120	3

<sup>1</sup>Alta and Kentucky 31.

Source: USDA, ERS, derived from the April survey of farm supply dealers conducted by NASS.

**Table 4—U.S. exports and imports of seed for planting, 1992-96**

Item	1992	1993	1994	1995	1996	Change 95-96 Percent
-----\$ million-----						
<b>Exports:</b>						
Forage	114	116	120	115	139	21
Vegetable	221	218	240	242	231	-5
Flower	19	19	22	27	32	19
Corn, field (not food aid)	171	168	181	165	144	-18
Grain sorghum	34	34	20	12	19	58
Soybean	36	28	23	25	25	0
Tree/shrub	3	2	2	2	4	100
Sugarbeet	3	3	4	2	3	33
Other	68	31	41	77	101	31
Total	669	619	652	667	698	5
<b>Imports:</b>						
Forage	45	45	39	44	52	18
Vegetables	82	83	85	97	107	10
Flower	27	31	35	43	56	30
Corn, certified	35	29	44	35	63	80
Tree/shrub	2	2	1	2	4	100
Other	15	17	23	22	32	45
Total	206	208	227	243	314	29
<b>Trade balance</b>	463	411	425	424	384	-9

Source: USDA, ERS, based on Foreign Agricultural Service data.

**Table 5—U.S. exports of corn and soybean seed by country of destination and volume, 1992-96**

Country	1992	1993	1994	1995	1996	Change 95-96
<b>Corn seed</b>	-----Metric tons-----					Percent
Canada	8,192	8,678	15,421	16,890	13,217	-22
Mexico	12,472	15,750	16,453	15,175	15,087	-1
France	13,859	8,177	6,188	7,732	5,030	-35
Spain	2,791	2,492	4,004	4,796	3,546	-26
Italy	23,955	14,178	11,782	15,042	10,383	-31
Netherlands	2,791	4,834	7,977	7,062	6,691	-5
Subtotal	65,054	56,054	62,170	66,697	53,954	-19
All others	13,455	32,600	43,126	17,724	32,229	88
Total, all countries	78,509	88,729	105,296	84,421	86,183	2
<b>Soybean seed</b>						
Mexico	32,674	19,472	8,891	23,159	23,160	0
Italy	34,500	27,764	15,711	14,672	12,970	-12
Japan	7,341	7,439	9,654	19,741	27,751	41
Subtotal	74,515	54,675	34,256	57,572	63,881	11
All others	9,070	14,216	13,700	6,410	10,030	56
Total, all countries	83,585	68,891	47,964	63,962	73,911	16

Source: USDA, ERS, compiled from Foreign Agricultural Service data.

#### Agricultural Resource Management Study Surveys

The 1996 surveys included corn, cotton, soybeans, wheat, and potatoes and represented about 172 million acres in major producing States, which account for about 73 percent of the total U.S. acreage for these crops:

Corn: IL, IN, IA, MI, MN, MO, NE, OH, SD, and WI

Soybeans: North = IL, IN, IA, MN, MO, NE, and OH; South = AR, LA, MS, AND TN

Cotton: AR, CA, GA, LA, MS, TN, and TX

Wheat Winter = CO, ID, KS, MT, NE, OK, OR, SD, TX, and WA; Spring = MN, MT, and ND; Durum = ND

Fall potatoes: ID, ME, WA, and parts of MN and ND in the Red River Valley

#### State Level Data

Nutrient use and management data for individual surveyed States may be obtained through ERS AutoFAX. You must call from a telephone attached to a fax machine. Place a call to **202-694-5700**, using the handset attached to your fax. When you get a voice prompt, press 4. When prompted for the document number, enter 20308. When asked for a yes or no response, press 1 for yes and 2 for no on the telephone keypad.

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